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EXPLORING TREATMENT OPTIONS FOR POST-SURGICAL BACK PAIN

Diagnosing and treating neuropathic pain can be extremely challenging. Nearly one-third (30%) of patients that undergo back surgery fail to significantly improve function and/or effectively manage pain.^{1,2} A significant number of patients continue to experience pain after spinal surgery.^{3,4}

Pain Specialists and Surgeons: Working Together to Advance Pain Management

“To successfully treat neuropathic pain, physicians must examine both structural and electrical problems,” said Daniel Bennett, MD, interventional spine and pain specialist with Integrative Treatment Centers in Denver, and Associate Clinical Professor at the University of Colorado Health Sciences Center.

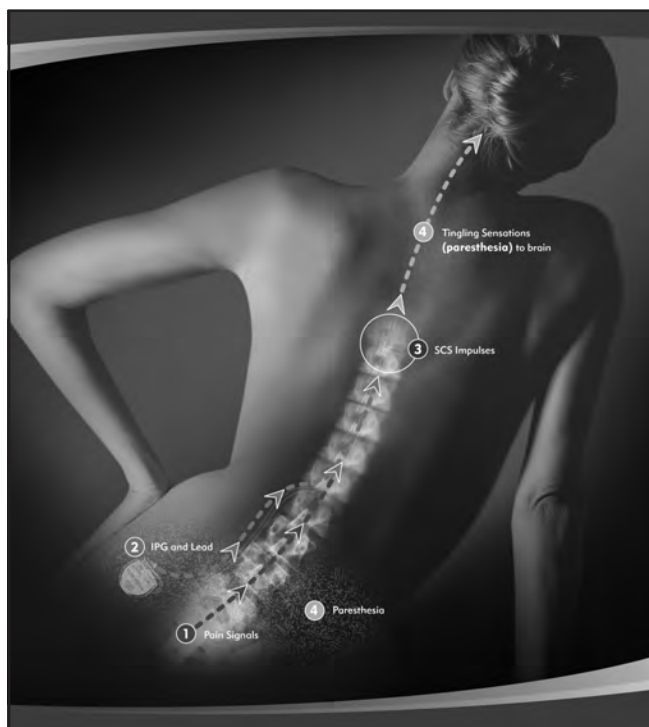
Bennett notes that design of optimal treatment plans benefits from collaboration of structuralists and neuromodulators (mainly neurosurgeons and anesthesiologists). He further explained

that an effective pain management team has “the neuromodulator (i.e., interventional pain physician) and/or structuralist (i.e., surgeon) diagnosing spine problems with the structuralist treating structural problems, while the neuromodulator treats electrical (nerve) problems. The two work hand-in-hand.”

Early Introduction of SCS Therapy: Yielding Better Long-Term Patient Outcomes

A clinical care option for 30-plus years, Spinal cord stimulation (SCS) therapy is currently used by more than 200,000 people for chronic pain management.

Research supports that SCS is highly effective for treatment of neuropathic pain including injured or impaired nerve fibers.⁵ If provided as an early treatment option, SCS successfully reduces chronic pain levels in failed back surgery syndrome (FBSS) patients who may not benefit from conventional treatments.^{5,6}



SPINAL CORD STIMULATION THERAPY: HOW IT WORKS

1. Pain signals travel along the spinal cord to the brain.
2. A small, rechargeable Implantable Pulse Generator (IPG) produces electrical impulses. These impulses travel along one or two small wires called Leads, which are attached to the IPG. Each Lead has eight tightly spaced electrode contacts.
3. Electrode contacts deliver the electrical impulses to specific locations on the spinal cord to mask the pain signals.
4. The masked signals then travel to the brain where they are often perceived or felt as a smooth, tingling sensation, called paresthesia, and the feeling of pain is reduced.

SCS may also offer relief for patients with neuropathy pain of the trunk and/or extremities (axial low back pain, lumbar radiculopathy, complex regional pain syndrome⁷ (or RSD) and peripheral neuropathy).

Jeffrey M. Epstein, MD, neurosurgeon and pain specialist practicing in New York, comments, “The bottom line with SCS is that it costs very little to do a trial, the risks of doing the procedure are minimal, and the potential rewards are great. Unless someone is having severe pain due to spinal instability, or a significant spondylolisthesis, one has very little to lose with a trial of stimulation . . . I have patients with degenerative disk disease who are potential candidates for fusion who have done quite well with stimulation and therefore have avoided fusions (and their known complications, failure rates, etc.). In summary, one has little to lose by trying stimulation first.”

SCS Therapy: Offering Advanced Therapeutic Intervention


“What’s new is the ability to capture the various characters of pain (i.e., burning, aching, stinging) in multiple sites,” said Bennett. “With a new multiple independent current control [MICC] system, you can control each electrode separately (i.e., amplitude, pulse width and frequency)—thus treating burning pain at the same time as stinging pain. This multiple source system also allows the current density (the ‘effective’ part of a stimulation device) to be maintained on the target. [These innovations are

designed to lead to better clinical outcomes that translate into the] patients feeling better.”

Epstein’s experience is similar: “With the independent current controlled devices (i.e., Boston Scientific) we are able to capture areas, and maintain coverage to these areas, where we weren’t able to in the past. The ease of programming is much, much faster and as scar tissue builds up, the system reads feedback and adjusts accordingly. This [advancement] has occurred in the last 3 years.”

Neuromodulation, explained Epstein, starts by conducting a preliminary assessment, including a diagnostic evaluation period with leads in the epidural space and external SCS system to determine the level of pain relief. Viable candidates then undergo a reversible surgical procedure to implant a small, rechargeable device (typically in the upper buttocks) and leads. When turned on, the implant generates electrical pulses that stimulate the nerves in the dorsal column and masks pain with a gentle sensation called paresthesia.

Epstein noted that with “older [SCS] systems, patients come back frequently . . . as scar tissue develops the level of voltage/level of current may be impacted,” and readjustments have to be made. That is no longer true today. Today, SCS therapy may be individually tailored by taking into account unique pain patterns and patient anatomy, providing long-term pain relief.

Both Bennett and Epstein commented on the high levels of patient satisfaction following SCS therapy. Patients no longer struggle with the side effects of opiates and other pain medications and most resume work and other activities. 

To Learn More

Through the development and advocacy of less-invasive medical devices and procedures, Boston Scientific strives to improve the quality of patient care and the productivity of health care delivery.

For more information on the Precision Plus™ SCS System, call 1-866-360-4747, or visit the company’s Web site at www.ControlYourPain.com.

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